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EXAMINER	
RAO, ANAND SHASHIKANT	
ART UNIT	**PAPER NUMBER**
2621	

DATE MAILED: 08/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/600,079	Applicant(s) LINZER, ELLIOT N.	
	Examiner Andy S. Rao	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on *05 June 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-25* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-25* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 6/5/06 with respect to claims 1-25 (amended) have been fully considered but they are not persuasive.

2. The Applicant presents nine arguments contending the Examiner's rejection of claims 1-25 under 35 USC 103(a) as being unpatentable over Kato et al., (hereinafter referred to as "Kato"), as was set forth in the Office Action of 4/12/06, said arguments being presented in support of now amended claims 1-25. However, after a careful consideration of the arguments presented, the Examiner must respectfully disagree for the reasons that follow and maintain the applicability of the Kato reference for the reasons that follow. A detailed rejection addressing the newly added limitations follows this section.

After establishing the relevant features of claim 1 (Amendment of 6/5/06: page 10, lines 6-19; page 11, lines 1-4), the Applicants argue that Kato as applied fails to disclose "...exchanging a particular value of a plurality of values with a memory, each of the values defining which of two blocks use which of a plurality of motion vectors based on one of a plurality of prediction types..." as in claims 1, 13, and 20-21 (Amendment of 6/5/06: page 11, lines 5-9). The Examiner respectfully disagrees. While it is noted that the register index designation signal is used for register access (Kato: column 23, lines 25-35), it is noted that with the Examiner's modification of the register index designation signal's combination with motion vector value would be written into the memory as the originally disclosed motion vector value is written into the memory (Kato: column 23, lines 60-67; column 24, lines 1-12). Accordingly, the Examiner maintains that the limitation would be met.

Secondly, the Applicants argue that Kato fails to that the "...values define which of the two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types..." as in the claims (Amendment of 6/5/06: page 11, lines 10-22). The Examiner respectfully disagrees. The registers themselves dictate what kind vector is being contained and what kind of prediction mode is being used. Kato discloses that the registers have a one-to-one correspondence with the type of motion vectors stored in the registers with respect to a first and a second macroblock (Kato: column 20, lines 40-55). As such, the register index designation signal also establishes this one to one correspondence of the register with the forward and backward vectors for the respective first and second macroblocks (Kato: column 20, lines 56-67), and these vectors are used in accordance with a plurality of prediction modes (Kato: column 2, lines 1-31; column 6, lines 35-55; column 20, lines 1-40: "forward predictive, backward predictive, bi-directional predictive, dual-prime prediction, field prediction with odd field parity, field prediction with even field parity, 16x16 field prediction, 16x8 field prediction, and 8x8 field prediction"). Accordingly, the Examiner maintains that this limitation is met.

Thirdly, the Applicants argue that Kato fails to disclose "...regarding two prediction types for two reference picture lists..." as in the claims (Amendment of 6/5/06: page 11, lines 23-25; page 12, lines 1-6). The Examiner respectfully disagrees. As discussed above, the Examiner notes that Kato discloses a plurality of prediction types, which each type having its own reference picture list (Kato: column 2, lines 1-31; column 6, lines 35-55; column 20, lines 1-40: "forward predictive, backward predictive, bi-directional predictive, dual-prime prediction, field prediction with odd field parity, field prediction with even field parity, 16x16 field

prediction, 16x8 field prediction, and 8x8 field prediction"). Accordingly, the Examiner maintains that the limitation is met.

Furthermore, the Applicants argue that the Examiner's modification is improperly based on the claims, and is too general because it could cover almost any contemplated alteration and does not address why the specific proposed modification would have been obvious (Amendment of 6/5/06: page 12, lines 6-25; page 13, lines 1-3). The Examiner respectfully disagrees. Firstly, the Examiner must put to rest the specious assertion that almost any contemplated alteration would be covered. The modification was specific to "motion vector decoding" and in the context of such a process, efficient reconstruction would be achieved. As one of ordinary skill in the art knows, there are many steps on image reconstruction according to the MPEG standard, and thus only changes in "motion vector decoding..." as stipulated by the Examiner would covered by the modification. This leaves out variable length decoding, inverse DCT processing, inverse quantization, and the sort, as reconstruction steps that would not be covered by the Examiner's sufficiently motivated modification (Kato: column 27, lines 10-55). Now, to the Applicant's suggestion that there is nothing in Kato to suggest the Examiner's combination. Again, the Examiner must respectfully disagree. Case law has long established that it obvious to make something integral that was once separate, so Kato really doesn't have to actually contain such a suggestion, as long as it doesn't teach away from such a modification. However, that being said, the Examiner notes that the specific modification of combining the register index designation value with the motion vector value is suggested by ensuring that a corrupted or erroneous vector value can be deduced by using the associated register index designation value indicating the reference frame from which to interpolate the correct value of the corrupted vector the adjacent

vectors, or by using the associated register index designation value to ensure that vectors are properly scaled in a skip block process (Kato: column 25, lines 45-65). Accordingly, the Examiner maintains that the modification is proper.

Additionally, the Applicants argue that even with the proposed modification of Kato as it applies claim 21, the limitation of "...a representation for motion having less than a maximum number of bits capable of representing each possible combination of the four motion vectors for the two blocks..." as in the claim (Amendment of 6/5/06: page 13, lines 3-23). The Examiner respectfully disagrees. Firstly, it is noted that an unmodified application of Kato reads on the claim. It is noted that the scaling circuit which scales down the motion vector values generates a representation of motion having less than the maximum number of bits capable of representing each one of said motion vectors (Kato: column 23, lines 50-67; column 24, lines 1-24). Accordingly, even with the modification, the Examiner maintains that the limitation is met.

Furthermore, the Applicants argue that Kato fails to disclose "...how many motion vectors are used by at least one of the two blocks..." as in claim 6 (Amendment of 6/5/06: page 13, lines 24-25; page 14, lines 1-8). The Examiner strongly disagrees. It is noted that for the macroblocks in various prediction modes, a count of 2 vectors or 4 (2 forward and 2 backward) vectors at a maximum is maintained based on the type of prediction mode (Kato: column 19, lines 45-67). Accordingly, the Examiner maintains that the limitation is met.

Additionally, the Applicants argue that Kato fails to disclose a list 0 prediction of the prediction types of motion vectors, where each of the motion vectors is used for a different one of the two blocks (Amendment of 6/5/06: page 14, lines 9-24). The Examiner respectfully disagrees. It is noted that the macroblock of figure 7 has two motion vectors, one that represents

a top half of the macroblock, and one that represents a bottom half of the macroblock (Kato: column 33, lines 65-67; column 34, lines 1-30). As such, the Examiner maintains that Kato does read on the "...list 0 prediction..." as broadly recited in the claim.

Furthermore, the Applicants argue that Kato fails to disclose the "...grouping of multiple vectors..." as in the claims (Amendment of 6/5/06: page 15, lines 1-8). The Examiner disagrees. It is noted that the registers disclose where the grouped together vectors are stored (Kato: column 20, lines 40-55), and that Kato further discloses that the grouping can be a count of two (Kato: column 20, lines 1-35), and be up to a maximum of four (Kato: column 19, lines 50-60; column 23, lines 20-35). Accordingly, the Examiner maintains that the limitation is met, as well.

Lastly, the Applicants argue that Kato fails to discloses that the presentation is a "base 2 logarithm number of a product of a first, second, third, and fourth number rounded up to the nearest integer..." as in claim 24 (Amendment of 6/5/06: page 15, lines 8-20). The Examiner respectfully disagrees. The noted citation discloses the generation of motion vector count of 1, 2, or 4, each of which is an exponential representation of 2: $2^0=1$, $2^1=2$, $2^2=4$. And since each vector value is a binary representation, the products of the vector values and the vector counts is also a less than a base 2 logarithm. And since, the vector values themselves are scaled (Kato: column 23, lines 50-60), the product would be rounded up to a nearest integer.

A detailed rejection follows below.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 21, and 23-24 (amended) are rejected under 35 USC 102(b) as being anticipated by Kato et al., (hereinafter referred to as "Kato").

Kato discloses a method for representing a motion for two blocks (Kato: column 34, lines 65-67; column 35, lines 1-20), comprising the steps: generating a representation for said motion (Kato: column 20, lines 40-67) having less than a maximum number of bits capable of representing each possible combination (Kato: column 23, lines 51-67; column 24, lines 1-23) of four motion vectors (Kato: column 19, lines 52-65; column 25, lines 25-35) for said two blocks (Kato: column 20, lines 40-60); and exchanging said representation with a memory (Kato: column 23, lines 40-50), wherein said exchanging includes at least one of read from said and writing to said memory (Kato: column 7, lines 60-67; column 8, lines 1-20), as in claim 21.

Regarding claim 23, Kato discloses wherein said representation is configured to accommodate a first number of possible vectors for a first of said motion vectors for a first block of said two blocks, a second number of possible vectors for a second of said motion vectors for a first block of said two blocks, a third number of possible vectors for a third of said motion vectors for a second block of said two blocks, a fourth number of possible vectors for a fourth of said motion vectors for a second block of said two blocks (Kato: column 19, lines 40-67; column 20, lines 40-60; column 23, lines 25-35), as in the claim.

Regarding claim 24, Kato discloses wherein said presentation is less than a base two logarithm product (Kato: column 20, lines 1-35: generation of motion vector count of 1, 2, or 4, each of which is an exponential representation of 2: $2^0=1$, $2^1=2$, $2^2=4$ which is a base 2 logarithm

value) of said first number, said second number, said third number, and said fourth number rounded up to a nearest integer (Kato: column 23, lines 43-67), as in the claim.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-20, 22 and 25 (amended) are rejected under 35 USC 103(a) as being unpatentable over Kato et al., (hereinafter referred to as "Kato").

Kato discloses a method for representing a motion for two blocks (Kato: column 34, lines 65-67; column 35, lines 1-20), comprising the steps: exchanging a plurality of values with a memory (Kato: column 7, lines 40-54 and 60-7; column 8, lines 1-11), each of said values defining (Kato: column 23, lines 10-35) which of said blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types (Kato: column 19, lines 45-67; column 20, lines 1-55), wherein said prediction types include a first prediction type for a first reference picture list and a second prediction type for a second reference picture list and said exchanging includes at least one of reading from said memory and writing to said memory (Kato: column 2, lines 1-31; column 6, lines 35-55; column 20, lines 1-40: "forward predictive, backward predictive, bi-directional predictive, dual-prime prediction, field prediction with odd field parity, field prediction with even field parity, 16x16 field prediction, 16x8 field prediction, and 8x8 field prediction"); and representing said motion for said two blocks with a second motion group

comprising of said all motion vectors (Kato: column 21, lines 60-67; column 22, lines 47-60), as in claim 1. However, Kato fails to disclose that the group comprises both the particular value and the motion vectors, as in the claim. However, one of ordinary skill in the art would note that since Kato discloses generating a register index designation signal for accessing one of four motion vector registers containing the motion vectors (Kato: column 24, lines 20-35), it would have obvious for one of ordinary skill in the art to further group the register index designation signal with the selected motion vector in order to enable vector processing on the decoding side of the method for efficient reconstruction by ensuring that the correct reference frame can be access even if the motion vector value has been corrupted (Kato: column 29, lines 50-67; column 30, lines 1-32). The Kato method, now grouping the register index designation signal with the motion vector, has all of the features of claim 1.

Regarding claim 2, the Kato method, now grouping the register index designation signal with the motion vector, has wherein said group comprising a plurality of bits that is less than a maximum number of bits capable of representing each unique possibility for said motion vectors (Kato: column 20, lines 1-35; column 23, lines 50-60), as in the claim.

Regarding claims 3-4, the Kato method, now grouping the register index designation signal with the motion vector, has wherein a first plurality of said motion vectors for a first of said two blocks are equal to a second plurality of said motion vectors for a second of said two blocks (Kato: column 19, lines 45-67; column 23, lines 25-35), as in the claims.

Regarding claims 5-6, the Kato method, now grouping the register index designation signal with the motion vector, has wherein said group includes at most two of said motion vectors (Kato: column 20, lines 1-35), as in the claims.

Regarding claim 7, the Kato method, now grouping the register index designation signal with the motion vector, has wherein one said value defines using none of said motion vectors (Kato: column 2, lines 30-32; column 25, lines 63-67), as in the claim.

Regarding claim 8, the Kato method, now grouping the register index designation signal with the motion vector, has using a list 0 prediction of said prediction types, wherein each of said motion vectors is used for a different one said two blocks (Kato: figure 7, vectors for MB0; column 32, lines 75-67; column 1-43), as in the claim.

Regarding claim 9, the Kato method, now grouping the register index designation signal with the motion vector, has using list 1 prediction types for said motion vectors, wherein each of said motion vectors is used for one of said blocks (Kato: figure 7, vectors for MB1; column 34, lines 1-20), as in the claim.

Regarding claim 10, the Kato method, now grouping the register index designation signal with the motion vector, has using a bi-directional prediction of for said motion vectors, wherein each is used for both of said two blocks (Kato: column 18, lines 1-5), as in the claim.

Regarding claim 11, the Kato method, now grouping the register index designation signal with the motion vector, has the sub-steps of: generating said group with said particular value while a bitstream and above a predetermined standard level for generating said groups without said particular value while below said predetermined standard level for said bitstream (Kato: column 24, lines 10-35), as in the claim.

Regarding claim 12, the Kato method, now grouping the register index designation signal with the motion vector, has interpreting said motion vectors in said group based upon said particular value for a bitstream and using said motion vectors in said group independently of said

particular value while for said bitstream, while above a predetermined standard level below said predetermined standard level (Kato: column 40, lines 40-67; column 26, lines 1-60), as in the claim.

Kato discloses an apparatus (Kato: figure 1), comprising: a memory (Kato: column 23, lines 40-50); and a circuit configured to exchange a particular value of a plurality of values (Kato: column 7, lines 40-54 and 60-67; column 8, lines 1-11) with said memory (Kato: column 23, lines 5-20), each of said values defining (Kato: column 23, lines 10-35) which of said two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types (Kato: column 19, lines 45-67; column 20, lines 1-55), wherein said prediction types include a first prediction type for a first reference picture list and a second prediction type for a second reference picture list and said exchanging includes at least one of reading from said memory and writing to said memory (Kato: column 2, lines 1-31; column 6, lines 35-55; column 20, lines 1-40: "forward predictive, backward predictive, bi-directional predictive, dual-prime prediction, field prediction with odd field parity, field prediction with even field parity, 16x16 field prediction, 16x8 field prediction, and 8x8 field prediction"); and represent a motion for said two blocks with a second motion group comprising of said all motion vectors (Kato: column 21, lines 60-67; column 22, lines 47-60), as in claim 13. However, Kato fails to disclose that the group comprises both the particular value and the motion vectors, as in the claim. However, one of ordinary skill in the art would note that since Kato discloses generating a register index designation signal for accessing one of four motion vector registers containing the motion vectors (Kato: column 24, lines 20-35), it would have obvious for one of ordinary skill in the art to further group the register index designation signal with the selected motion vector in order to

enable vector processing on the decoding side of the apparatus for efficient reconstruction by ensuring that the correct reference frame can be access even if the motion vector value has been corrupted (Kato: column 29, lines 50-67; column 30, lines 1-32). The Kato apparatus, now grouping the register index designation signal with the motion vector, has all of the features of claim 13.

Regarding claim 14, the Kato apparatus, now grouping the register index designation signal with the motion vector, has wherein said group comprising a plurality of bits that is less than a maximum number of bits capable of representing each unique possibility for said motion vectors (Kato: column 20, lines 1-35; column 23, lines 50-60), as in the claim.

Regarding claims 15-16, the Kato apparatus, now grouping the register index designation signal with the motion vector, has wherein said group includes at most two of said motion vectors (Kato: column 20, lines 1-35), as in the claims.

Regarding claim 17, the Kato apparatus, now grouping the register index designation signal with the motion vector, has a coding circuit configured to encode said particular value within a bitstream (Kato: figure 1), as in the claim.

Regarding claim 18, the Kato apparatus, now grouping the register index designation signal with the motion vector, has a decoder circuit configured to decode said particular value from a bitstream (Kato: figure 5), as in the claim.

Regarding claim 19, the Kato apparatus, now grouping the register index designation signal with the motion vector, has a first of said values defines none of said motion vectors (Kato: column 18, lines 5-10); a second of said values defines a first prediction of said prediction types (Kato: column 17, lines 60-62); a third of said values defines a second prediction of said

prediction types (Kato: column 17, lines 63-65); and fourth said values defines a bidirectional prediction of said prediction types (Kato: column 18, lines 1-5), as in the claim.

Kato discloses an apparatus (Kato: figure 1), comprising: means for storing a group (Kato: column 23, lines 40-50); means for exchanging a particular value of a plurality of values (Kato: column 7, lines 40-54 and 60-67; column 8, lines 1-11) with said means for storing (Kato: column 23, lines 5-20), each of said values defining (Kato: column 23, lines 10-35) which of two blocks use which of a plurality of motion vectors based upon one of a plurality of prediction types (Kato: column 19, lines 45-67; column 20, lines 1-55), and representing a motion for said two blocks with a second motion group comprising of said all motion vectors (Kato: column 21, lines 60-67; column 22, lines 47-60), wherein said prediction types include a first prediction type for a first reference picture list and a second prediction type for a second reference picture list and said exchanging includes at least one of reading from said means for storing and writing to said means for storing (Kato: column 2, lines 1-31; column 6, lines 35-55; column 20, lines 1-40: "forward predictive, backward predictive, bi-directional predictive, dual-prime prediction, field prediction with odd field parity, field prediction with even field parity, 16x16 field prediction, 16x8 field prediction, and 8x8 field prediction"), as in claim 20. However, Kato fails to disclose that the group comprises both the particular value and the motion vectors, as in the claim. However, one of ordinary skill in the art would note that since Kato discloses generating a register index designation signal for accessing one of four motion vector registers containing the motion vectors (Kato: column 24, lines 20-35), it would have obvious for one of ordinary skill in the art to further group the register index designation signal with the selected motion vector in order to enable vector processing on the decoding side of the apparatus for efficient

reconstruction by ensuring that the correct reference frame can be access even if the motion vector value has been corrupted (Kato: column 29, lines 50-67; column 30, lines 1-32). The Kato apparatus, now grouping the register index designation signal with the motion vector, has all of the features of claim 20.

Kato discloses a method for representing a motion for two blocks (Kato: column 34, lines 65-67; column 35, lines 1-20), comprising the steps: generating a representation for said motion (Kato: column 20, lines 40-67) having less than a maximum number of bits capable of representing each possible combination (Kato: column 23, lines 51-67; column 24, lines 1-23) of four motion vectors (Kato: column 19, lines 52-65; column 25, lines 25-35) for said two blocks (Kato: column 20, lines 40-60); and exchanging said representation with a memory (Kato: column 23, lines 40-50), wherein said exchanging includes at least one of read from said and writing to said memory (Kato: column 7, lines 60-67; column 8, lines 1-20), as in claim 22. However, Kato fails to explicitly disclose that the representation is a binary representation, as in the claim. But Kato does disclose using a parity bit along with the vector representation in order to indicate field parity for motion compensation (Kato: column 27, lines 30-67). Accordingly, given this disclosure, it would have been obvious for one of ordinary skill in the art to also have the vector values as a binary representation, so that the vector value and parity value can be stored together in the registers performing efficient field based prediction (Kato: column 20, lines 1-35). The Kato method, now incorporating representing both the parity signal and the vector signal as a binary representation, has all of features of claim 22.

Kato discloses a method for representing a motion for two blocks (Kato: column 34, lines 65-67; column 35, lines 1-20), comprising the steps: generating a representation for said motion

(Kato: column 20, lines 40-67) having less than a maximum number of bits capable of representing each possible combination (Kato: column 23, lines 51-67; column 24, lines 1-23) of four motion vectors (Kato: column 19, lines 52-65; column 25, lines 25-35) for said two blocks (Kato: column 20, lines 40-60); and exchanging said representation with a memory (Kato: column 23, lines 40-50), wherein said exchanging includes at least one of read from said and writing to said memory (Kato: column 7, lines 60-67; column 8, lines 1-20), wherein said representation is capable of representing up to two motion vectors for each of two blocks (Kato: column 19, lines 40-67; column 23, lines 25-34), as in claim 25. However, Kato fails to disclose having up to 67,108,884 unique values and using fewer than 104 bits, as in the claim. But the Examiner notes that achieving such vector resolution would have been obvious to one of ordinary skill in the art in order to characterize extremely fine motions occurring within the image. The Kato method, now modified to have the vector have up to 67,108,884 unique values and using fewer than 104 bits, has all of the features of claim 25.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andy S. Rao whose telephone number is (571)-272-7337. The examiner can normally be reached on Monday-Friday 8 hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mehrdad Dastouri can be reached on (571)-272-7418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Andy S. Rao
Primary Examiner
Art Unit 2621

ANDY RAO
PRIMARY EXAMINER

asr
August 14, 2006